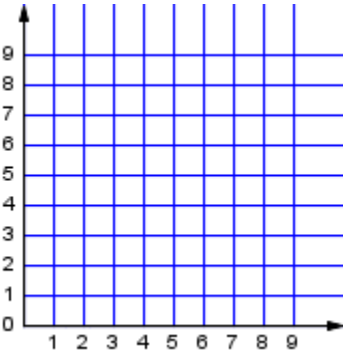
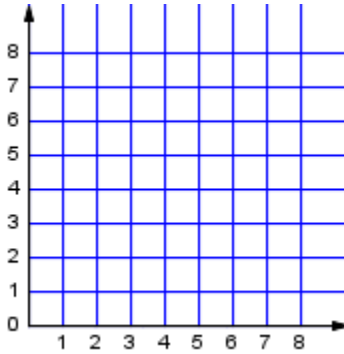


Diagnostic Test

Express each phrase as an algebraic expression.

1. 8 decreased by a number r	2. add 11 to a number n
3. take away a number c from 6	4. sum of 19 and a number h
5. product of 49 and a number m	6. a number b less 43

Draw the ordered points on the grid. Label each point.

<p>7.</p>  <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <p>G (9, 2)</p> <p>J (1, 0)</p> <p>Y (6, 0)</p> <p>C (6, 9)</p> <p>F (8, 9)</p> <p>K (2, 4)</p> </div> <div style="width: 45%;"></div> </div>	<p>8.</p>  <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"></div> <div style="width: 45%;"> <p>Q (4, 3)</p> <p>S (7, 2)</p> <p>F (0, 6)</p> <p>B (3, 0)</p> <p>K (5, 6)</p> <p>D (4, 1)</p> </div> </div>
---	--

Divide.

9. $60 \overline{)79,080}$	10. $80 \overline{)469,920}$	11. $60 \overline{)192,720}$
12. $15 \overline{)28,170}$	13. $41 \overline{)267,402}$	14. $28 \overline{)70,392}$

Complete.

<p>15. Emily had been very attentive in her math class, but she still wasn't certain if she understood the concepts of negative numbers. She knew that all negative numbers are less than zero and that all positive numbers are greater than zero. She was having trouble with adding positive and negative numbers together, though. Do you know how to add positive and negative numbers? What is the sum of negative thirteen and thirteen?</p>	<p>16. Celia has six chickens and two roosters. How many animals does Celia have?</p>
---	---

Use the clue to fill in the missing digit.

<p>17. The number 16□ is divisible by 7.</p>	<p>18. The number 114□ is divisible by 3.</p>
<p>19. The number □16 is divisible by 4.</p>	<p>20. The number 15□ is divisible by 2.</p>
<p>21. The number 29□ is divisible by 9.</p>	<p>22. The number 4□95 is divisible by 5.</p>
<p>23. The number 1□4 is divisible by 8.</p>	<p>24. The number 46□2 is divisible by 6.</p>

Solve each equation.

<p>25. $41 = w + 26$</p>	<p>26. $44 = 37 + z$</p>	<p>27. $u + 10 = 83$</p>
<p>28. $49 + g = 71$</p>	<p>29. $p + 18 = 74$</p>	<p>30. $a + 25 = 59$</p>
<p>31. $81 = 2 + y$</p>	<p>32. $160 = 71 + f$</p>	<p>33. $115 = 80 + e$</p>

Complete each divisibility table. Write yes if the number is divisible by the given number. Write no if it is not divisible by the given number.

<p>34. 9,587</p> <p>by 3 _____</p> <p>by 4 _____</p> <p>by 5 _____</p> <p>by 7 _____</p> <p>by 9 _____</p>	<p>35. 54</p> <p>by 3 _____</p> <p>by 6 _____</p> <p>by 7 _____</p> <p>by 8 _____</p> <p>by 9 _____</p>	<p>36. 66</p> <p>by 2 _____</p> <p>by 5 _____</p> <p>by 6 _____</p> <p>by 8 _____</p> <p>by 9 _____</p>	<p>37. 448</p> <p>by 2 _____</p> <p>by 4 _____</p> <p>by 5 _____</p> <p>by 7 _____</p> <p>by 9 _____</p>
---	--	--	---

Write the place and the value of the underlined digit.

38. 59 <u>3</u>	39. <u>4</u>	40. 146,50 <u>8</u>	41. 4,10 <u>1</u>
42. <u>9</u> 3	43. <u>3</u>	44. 41 <u>3</u>	45. 9 <u>0</u> 5,125

Write each number in standard form.

46. $70 + 5$	47. five
48. six hundred thirty	49. 1 ten + 6 ones
50. six	51. 6 ones

Fill in the missing digits.

<p>52. $\begin{array}{r} 1 \square 0 \text{ r } \square \\ 4 \overline{) 4 \square} \quad 2 \\ \underline{4} \quad \square \\ 0 \quad 0 \\ \square \\ \underline{\square} \quad 2 \\ \square \\ \underline{\square} \quad 0 \\ \square \\ \underline{\square} \quad 2 \end{array}$</p>	<p>53. $\begin{array}{r} \square 3 \\ 6 \overline{) 3 \square} \quad 1 \quad \square \\ \underline{3} \quad 0 \quad \square \\ \square \quad 8 \\ \underline{1} \quad 8 \\ \square \end{array}$</p>
---	--

Complete.

<p>54. William went out on the lake in his motorboat to fish. He caught eight fish during the first hour. Without warning, a gale blew up and he had to go ashore for almost two hours. When he went back out he caught another fourteen fish. Then he began to have trouble with his motor, so he quit for the day. He gave his mother six of the fish, and then divided the remaining fish between his two aunts. How many fish did each aunt get?</p>	<p>55. The first telegraph lines were strung between Baltimore and Washington, D. C. It is thirty-six miles from Baltimore to Washington, D. C. It was suddenly possible to send a letter in just seconds. In the days of the Pony Express letters traveled by horse. If a horse could travel at eleven miles per hour, how long would it take a letter to travel from Baltimore to Washington, D.C.?</p>
--	---

Solve each equation.

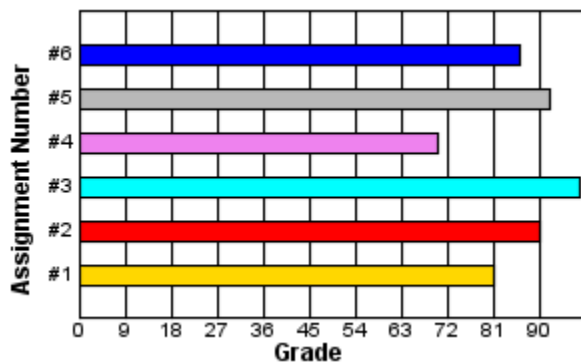
56. $4t = 40$	57. $13 = 39 \div x$	58. $8 = 72 \div j$
59. $2k = 28$	60. $\frac{d}{15} = 12$	61. $8v = 40$
62. $18 = s \div 10$	63. $187 = 17d$	64. $90 \div g = 15$

List all of the factors of each number.

65. 20	66. 42	67. 45	68. 75
69. 64	70. 94	71. 86	72. 60
73. 88	74. 82	75. 22	76. 71

Complete.

77. **Grades received on assignments**



a. How many assignments received grades that were at least 98?

b. What is the difference between the highest grade and the lowest grade?

c. Between which two assignments is there a difference of 8 points?

Complete.

78. $\begin{array}{r} 9,066,158 \\ + 1,474,064 \\ \hline \end{array}$	79. $\begin{array}{r} 8,896,738 \\ + 80,393 \\ \hline \end{array}$	80. $\begin{array}{r} 612,704 \\ + 8,748,337 \\ \hline \end{array}$	81. $\begin{array}{r} 930,511 \\ + 51,006 \\ \hline \end{array}$
82. $\begin{array}{r} 57,637 \\ + 5,231,145 \\ \hline \end{array}$	83. $\begin{array}{r} 521,992 \\ + 360,187 \\ \hline \end{array}$	84. $\begin{array}{r} 8,850,153 \\ + 849,879 \\ \hline \end{array}$	85. $\begin{array}{r} 18,146 \\ + 21,213 \\ \hline \end{array}$

Fill in the missing digits.

$\begin{array}{r} 1 \\ \cdot \\ + \quad 2 \quad 5 \quad . \quad 1 \quad 8 \\ \quad \quad \square \quad . \quad 3 \quad \square \\ \hline 3 \quad 0 \quad . \quad \square \quad 4 \end{array}$	$\begin{array}{r} 2 \\ \cdot \\ + \quad 3 \quad \square \quad . \quad 5 \quad 8 \\ \quad \quad 3 \quad . \quad \square \quad 3 \\ \hline 4 \quad 2 \quad . \quad 4 \quad \square \end{array}$
$\begin{array}{r} 3 \\ \cdot \\ + \quad \quad 7 \quad . \quad \square \\ \quad \quad \square \quad . \quad 1 \\ \hline \square \quad 1 \quad . \quad 5 \end{array}$	$\begin{array}{r} 4. \\ + \quad \square \quad . \quad 6 \\ \quad \quad 5 \quad . \quad 1 \\ \hline 8 \quad . \quad \square \end{array}$

Compare. Write <, >, or =.

5. 0.03 _____ 0.30	6. 8.238 _____ 8.75
7. 2.902 _____ 2.2	8. 5.9 _____ 5.3


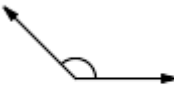

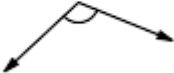
Find the mean for each set of data.

9. 195, 142, 165, 105, 195, 150, 100, 64, 74, 165, 80, 144, and 46
10. 94, 126, 56, 99, 7, 140, 80, 145, 41, and 2
11. 52, 192, 76, 132, 100, 84, 13, 187, 30, 126, 73, and 27

Complete. Write your answer as a mixed number in simplest form.

12. $\frac{2}{7} + \frac{1}{2} =$	13. $\frac{2}{3} - \frac{5}{9} =$	14. $\frac{3}{4} + \frac{1}{3} =$	15. $\frac{7}{8} - \frac{3}{4} =$
16. $\frac{1}{2} + \frac{4}{8} =$	17. $\frac{1}{6} + \frac{10}{12} =$	18. $\frac{8}{9} - \frac{2}{3} =$	19. $\frac{1}{2} - \frac{1}{4} =$

Classify each angle as *acute*, *obtuse*, *straight*, or *right*.

20. 	21. 	22. 	23. 
_____	_____	_____	_____

Write the value of .

24. $300 + 4 + 200,000 + 60,000 + 1,000 + \square = 261,354$	25. $7 \text{ hundreds} + \square \text{ ones} = 705$
26. $\square + 5,000 + 70,000 + 70 = 75,270$	27. $\square \text{ ten} + 5 \text{ ones} = 15$

Divide.

28. $5 \overline{)948}$	29. $5 \overline{)85}$	30. $4 \overline{)17}$
31. $2 \overline{)675}$	32. $5 \overline{)715}$	33. $7 \overline{)61}$

Divide.

34.	$34 \overline{)1,428,816}$	35.	$83 \overline{)975,665}$	36.	$83 \overline{)193,971}$
37.	$34 \overline{)2,931,514}$	38.	$32 \overline{)6,162,720}$	39.	$67 \overline{)793,414}$

Find the area and perimeter of each rectangle.

40. 8 cm wide, 8 cm long perimeter = _____ area = _____	41. 36 m wide, 31 m long perimeter = _____ area = _____	42. 24 mm wide, 9 mm long perimeter = _____ area = _____
---	---	--

Complete.

43.	<p style="text-align: center;">Favorite Fruit</p> <table border="1"> <thead> <tr> <th>Fruit</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Coconuts</td> <td> </td> </tr> <tr> <td>Watermelons</td> <td> </td> </tr> <tr> <td>Grapes</td> <td> </td> </tr> <tr> <td>Bananas</td> <td> </td> </tr> <tr> <td>Blackberries</td> <td> </td> </tr> <tr> <td>Blueberries</td> <td> </td> </tr> </tbody> </table>	Fruit	Number	Coconuts		Watermelons		Grapes		Bananas		Blackberries		Blueberries		<p>a. How many people did not choose blueberries as their favorite fruit?</p> <p>_____</p> <p>b. If 3 more people chose blackberries how many total people would have chosen blackberries?</p> <p>_____</p> <p>c. List the fruits in order from the fruit with the most votes to the fruit with the fewest votes.</p> <p>_____</p>
Fruit	Number															
Coconuts																
Watermelons																
Grapes																
Bananas																
Blackberries																
Blueberries																

Write two equivalent fractions for each.

44. $\frac{1}{13}$	45. $\frac{5}{6}$	46. $\frac{2}{4}$
47. $\frac{1}{5}$	48. $\frac{9}{12}$	49. $\frac{1}{2}$

$$50. \quad 2 \\ \overline{3}$$

$$51. \quad 7 \\ \overline{9}$$

$$52. \quad 3 \\ \overline{11}$$

Simplify.

53. $(62 \div 2) + (3 \times 2 + 1)$

54. $558 \div 3 - 5 \times 2$

Each letter in each question stands for a 1-digit number. In each question, no two letters may stand for the same number. Two separate problems are unrelated. Find a value for each letter.

55. $\begin{array}{r} \text{HOLE} \\ - \text{PLUS} \\ \hline \text{FIVE} \end{array}$ (Use the numbers: 9, 8, 3, 4, 6, 2, 1, 7, 5, and 0)	56. $\begin{array}{r} \text{HIDE} \\ - \text{FEEL} \\ \hline \text{SEE} \end{array}$ (Use the numbers: 3, 4, 0, 8, 2, 7, and 1)	57. $\begin{array}{r} \text{UNDER} \\ - \text{HAVE} \\ \hline \text{FOUND} \end{array}$ (Use the numbers: 5, 2, 4, 8, 1, 7, 6, 3, 9, and 0)
---	---	---

Write each number in standard form.

58. five hundred twenty-two thousand, eight hundred four	59. 1
60. 2 ten thousands 5 thousands 5 hundreds 3 tens 6 ones	61. eight thousand, five hundred twenty-two
62. $500 + 6$	63. $200 + 60 + 2$

Name _____

Date _____
(Answer ID # 0908331)

Find the value of n .

1. $\frac{5}{2} = \frac{50}{n}$ $n = \underline{\hspace{2cm}}$	2. $\frac{4}{3} = \frac{n}{36}$ $n = \underline{\hspace{2cm}}$	3. $\frac{2}{1} = \frac{n}{2}$ $n = \underline{\hspace{2cm}}$	4. $\frac{11}{5} = \frac{22}{n}$ $n = \underline{\hspace{2cm}}$
---	---	--	--

Complete the unit conversions.

5. 13,000 liters to kiloliters	6. 11 tons to pounds
--------------------------------	----------------------

7. 69 feet to yards

8. 26 quarts to pints

9. 648 hours to days

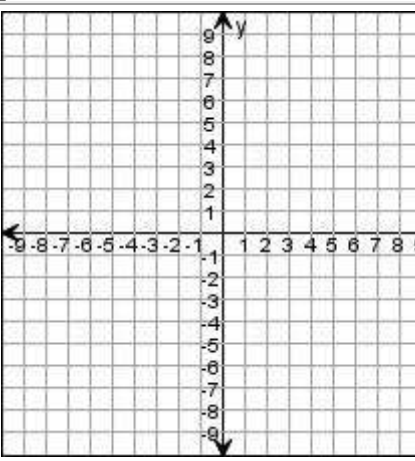
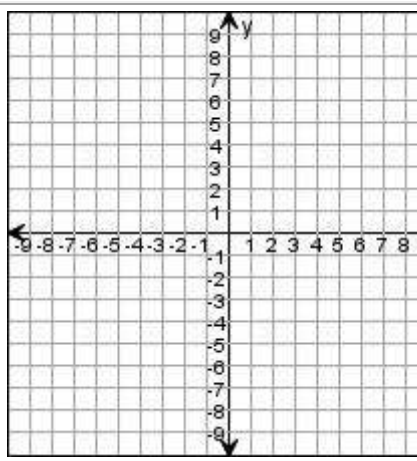
10. 8 centimeters to millimeters

Simplify.

11. $(8 - 3 + 182 \div 7) \times 3$

12. $(732 \div 2) + (414 \div 9)$

Complete the function table and then graph the function.

<p>13.</p>  <div style="display: flex; align-items: center; margin-left: 10px;"> <div style="margin-right: 10px;">$y = 2 - x$</div> <table border="1" style="border-collapse: collapse;"> <thead> <tr> <th style="padding: 5px;">x</th> <th style="padding: 5px;">y</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">0</td> <td style="width: 40px;"></td> </tr> <tr> <td style="text-align: center; padding: 5px;">1</td> <td></td> </tr> <tr> <td style="text-align: center; padding: 5px;">2</td> <td></td> </tr> <tr> <td style="text-align: center; padding: 5px;">3</td> <td></td> </tr> </tbody> </table> </div>	x	y	0		1		2		3		<p>14.</p>  <div style="display: flex; align-items: center; margin-left: 10px;"> <div style="margin-right: 10px;">$y = 5 - 4x$</div> <table border="1" style="border-collapse: collapse;"> <thead> <tr> <th style="padding: 5px;">x</th> <th style="padding: 5px;">y</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">-1</td> <td style="width: 40px;"></td> </tr> <tr> <td style="text-align: center; padding: 5px;">0</td> <td></td> </tr> <tr> <td style="text-align: center; padding: 5px;">1</td> <td></td> </tr> <tr> <td style="text-align: center; padding: 5px;">2</td> <td></td> </tr> </tbody> </table> </div>	x	y	-1		0		1		2	
x	y																				
0																					
1																					
2																					
3																					
x	y																				
-1																					
0																					
1																					
2																					

Solve each equation.

15. $16 = 2r$	16. $4 = 24 \div q$	17. $72 \div p = 9$
18. $j \div 9 = 2$	19. $7y = 35$	20. $24 = 4s$
21. $e \div 3 = 7$	22. $15 = 5a$	23. $6 = 2h$

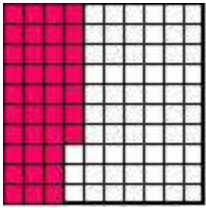
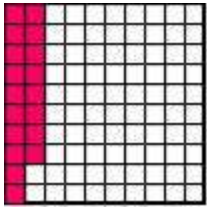
Complete.

<p>24. Senor Calvino is a historian in Rome. He goes to the Roman Coliseum four times a week. How many times will he visit the Coliseum during eleven weeks?</p>	<p>25. The fifth grade class surveyed 156 people. They found that $\frac{2}{3}$ of the people have umbrellas. Of the people who have umbrellas, $\frac{1}{2}$ have black umbrellas. How many people in the survey group have black umbrellas?</p>
--	---

Complete. Write your answer as a mixed number in simplest form.

26. $\frac{6}{7} \times 4 =$	27. $3 \times \frac{2}{12} =$	28. $\frac{1}{3} \div \frac{6}{7} =$	29. $\frac{6}{10} \div \frac{1}{4} =$
30. $\frac{2}{5} \div \frac{6}{11} =$	31. $\frac{2}{4} \times \frac{4}{12} =$	32. $\frac{6}{8} \times \frac{2}{8} =$	33. $\frac{11}{12} \div 5 =$

Write the percent of the shaded portion in each grid.

<p>34. </p>	<p>35. </p>
--	---

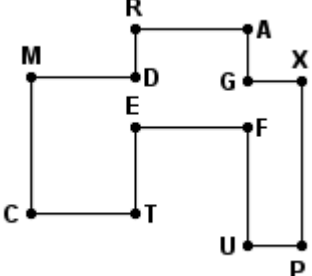
Find the missing number.

36. 45 to 9 = 5 to n	37. $9:n = 3:8$	38. 1 to $n = 7$ to 14
39. $24:27 = n:9$	40. $n = \frac{12}{24} = \frac{12}{48}$	41. 21 to $n = 13$ to 26

Complete.

<p>42. Alexis was hungry. She looked in the pantry but there was no food. There was no food in the refrigerator. She looked under her bed where she often kept cookies but only found one empty cookie jar. Well, she would have to buy something. She took \$7.02 out of her hiding place and walked to the store. She wanted as many seventy-eight cent candy bars as she could get. How many candy bars can she buy?</p>	<p>43. Sabrina is going to the bank today to wire money to her friend in China. The bank charges a handling fee of 1% of the total transaction amount. The exchange rate is CNY 8.34 per U.S. dollar. If Sabrina exchanges \$1,524.00, how much Chinese Yuan will her friend receive?</p>
---	---

Find the area and perimeter of each polygon.

44.		$\overline{RD}=24$ in	$\overline{EF}=56$ in	$\overline{XP}=82$ in	$\overline{MD}=52$ in
		$\overline{RA}=56$ in	$\overline{FU}=59$ in	$\overline{UP}=27$ in	$\overline{ET}=43$ in
		$\overline{AG}=26$ in	$\overline{GX}=27$ in	$\overline{MC}=68$ in	$\overline{CT}=52$ in

Complete.

<p>45. On the first day of school, Mountain Elementary School had 205 kindergarteners, 202 first graders, 149 second graders, 212 third graders, 133 fourth graders, and 102 fifth graders. How many students attended Mountain Elementary School on the first day?</p>	<p>46. Yosuke's favorite season is spring. In spring the street where she lives turns into a beautiful garden, because of the blooming trees that grow on the sides of the road. There are nine trees on one side, and fourteen trees on the other. How many trees are there on both sides of the road?</p>
---	---

Divide. Add 1 to 3 zeros in the dividend to solve each division problem.

<p>47.</p> $6 \overline{) 6.51}$	<p>48.</p> $5 \overline{) 8.6}$	<p>49.</p> $4 \overline{) 9.3}$
<p>50.</p> $8 \overline{) 9.3}$	<p>51.</p> $8 \overline{) 9.1}$	<p>52.</p> $2 \overline{) 7.7}$

Circle the equivalent fraction.

<p>53.</p> $\frac{2}{7}$ $\frac{3}{9} \quad \frac{3}{7} \quad \frac{6}{21} \quad \frac{4}{5}$	<p>54.</p> $\frac{3}{5}$ $\frac{5}{3} \quad \frac{12}{20} \quad \frac{2}{5} \quad \frac{3}{7}$
--	---

Complete.

<p>55. $80 + 59 + 29$</p>	<p>56. $83 + 30 + (73 + 31 + 84)$</p>
<p>57. $49 + 58 + 87 + 54$</p>	<p>58. $(69 + 19) + (28 + 61)$</p>
<p>59. $52 + 72 + 11 + 70 + 79$</p>	<p>60. $(14 + 9) + 43$</p>

Name _____

Date _____

<p>1. Mr. Moore works at the Levi Strauss factory. He packs boxes of jackets into larger cartons. Each carton is 4 feet x 4.8 feet x 3 feet. The boxes are 2 feet x 1.2 feet x 1 foot. How many boxes will fit in each carton?</p>	<p>2. The fifth grade class surveyed 192 people. They found that $\frac{2}{3}$ of the people have umbrellas. Of the people who have umbrellas, $\frac{1}{2}$ have black umbrellas. How many people in the survey group have black umbrellas?</p>
<p>3. Mackenzie bought a box of dog biscuits for her dog Rex. The box was 12 inches long, 6 inches wide, and 5 inches high. What is the surface area of the box?</p>	<p>4. John made a box to keep his dog's treats. The box is a rectangle 11 inches long and 8 inches wide. What is the perimeter of the box?</p>
<p>5. Mr. and Mrs. Johnson are having a party. They bought a box of tortilla chips so they can make their favorite Mexican dish. The box is $2\frac{1}{2}$ feet long, $1\frac{1}{2}$ feet wide, and 2 feet high. What is its volume?</p>	<p>6. On Monday, Rain-Away Umbrella Company manufactured 1.25 million umbrellas. On Tuesday, with increased production, they manufactured 1,743,042 umbrellas. How many more umbrellas did the company manufacture on Tuesday than it did on Monday?</p>
<p>7. Cameron is painting a rectangular box in red, white, and blue to make a base for a President's Day display. The box is 6 ft x 4 ft x 2 ft. Each can of paint covers 13 ft^2. He uses equal amounts of each color. How many cans of red paint will he need?</p>	<p>8. Justin's mother works at an umbrella factory. She cuts out the circles of waterproof fabric that are made into umbrellas. Each piece of fabric must have a diameter of 25 inches. What is the distance around (circumference) each circle of fabric? ($C = \pi d$)</p>
<p>9. Taylor used a rectangular glass container to make a terrarium on Quiet Day. The container is 4 feet x 1.3 feet x $\frac{1}{2}$ feet. She will fill $\frac{1}{2}$ of it with dirt. How many cubic feet of dirt will she need?</p>	<p>10. Which combination of coins is the largest amount of money? (a) 2 \$1 bills, 4 quarters, 3 pennies (b) 6 quarters, 11 dimes, 21 pennies (c) 8 quarters, 9 dimes, 4 nickels, 1 penny</p>

